Amendments to the claims:

1. (currently amended) A method for operating an internal combustion engine (10), in which an air filling (rl) in a combustion chamber (14) is ascertained, taking a pressure (ps) in an intake conduit (22) into account, characterized in that the air filling (rl) is ascertained on the basis of a model (A), which as its input variables receives an rpm (nmot) of a crankshaft (44) and a ratio of the pressure (ps) in the intake conduit (22) to an ambient pressure (pu), wherein the model (A), as its input variable, additionally receives a temperature (Tbr) of the air present in the combustion chamber (14), and wherein the temperature of the air present in the combustion chamber is ascertained on the basis of a model, which as its input variables receives a detected temperature of the air in the intake conduit and at least one further detected temperature of the engine, wherein said at least one further detected temperature is selected from the group consisting of a coolant temperature, an exhaust-gas temperature, a cylinder head temperature, or any combination of the coolant temperature, exhaust-gas temperature and cylinder head temperature.

2. (canceled)

3. (canceled)

4. (canceled)

5. (currently amended) The method as defined by claim 1, ~~characterized in that~~ wherein the ambient pressure (pu) is ascertained on the basis of a model (B), which as its input variables receives a difference (dp) between a detected pressure (ps) and a modeled pressure (psmod) in the intake conduit (22).

6. (currently amended) The method as defined by claim 5, ~~characterized in that~~ wherein the ambient pressure (pu) is ascertained only if the throttle valve opening, or an equivalent variable (msdk), reaches and/or exceeds a limit value (S).

7. (currently amended) The method as defined by claim 5, ~~characterized in that~~ wherein the modeled pressure (psmod) in the intake conduit (22) is ascertained on the basis of a model (C), which as its input variable receives a difference (drl) between an air flow rate (rldk), into the intake conduit (22), and an air flow rate (rlkdroh) out of the intake conduit (22) into the combustion chamber (14).

8. (currently amended) The method as defined by claim 7, ~~characterized in that~~ wherein the air flow rate (rlkdroh) out of the intake conduit (22) into the combustion chamber (14) is ascertained on the basis of a model (D), which as its input variable receives a position (wdkba) of a throttle valve (24).

9. (currently amended) The method as defined by claim 8, ~~characterized in that~~ wherein the model (D) additionally receives a correction variable (ofmsndk) of a throttle valve characteristic curve, which is ascertained from the difference (dp) between the modeled pressure (psmod) and the ascertained pressure (ps) in the intake conduit (22).

10. (currently amended) The method as defined by claim 9, ~~characterized in that~~ wherein the correction variable (ofmsndk) is ascertained only if the throttle valve opening, or an equivalent variable (msdk), is less than a limit value (S) and/or reaches that limit value.

11. (currently amended) The method as defined by claim 1, ~~characterized in that~~ wherein at least one model (A, D) includes a characteristic curve and/or a performance graph (50, 80).

12. (currently amended) A computer program, characterized in that it is programmed for use in a method ~~as defined by claim 1~~ for operating an internal combustion engine (10), in which an air filling (rl) in a combustion chamber (14) is ascertained, taking a pressure (ps) in an intake conduit (22) into account, characterized in that the air filling (rl) is ascertained on the basis of a model (A), which as its input variables receives an rpm (nmot) of a crankshaft (44) and a ratio of the pressure (ps) in the intake conduit (22) to an ambient pressure (pu), wherein the model (A), as its input variable, additionally receives a temperature

(Tbr) of the air present in the combustion chamber (14), and wherein the temperature of the air present in the combustion chamber is ascertained on the basis of a model, which as its input variables receives a detected temperature of the air in the intake conduit and at least one further detected temperature of the engine, wherein said at least one further detected temperature is selected from the group consisting of a coolant temperature, an exhaust-gas temperature, a cylinder head temperature, or any combination of the coolant temperature, exhaust-gas temperature and cylinder head temperature.

13. (previously presented) An electrical memory for a control and/or regulating device (48) of an internal combustion engine (10), characterized in that a computer program for use in a method for operating an internal combustion engine ~~as defined by claim 1~~ is stored in it, wherein in said method for operating the internal combustion engine, an air filling (rl) in a combustion chamber (14) is ascertained, taking a pressure (ps) in an intake conduit (22) into account, characterized in that the air filling (rl) is ascertained on the basis of a model (A), which as its input variables receives an rpm (nmot) of a crankshaft (44) and a ratio of the pressure (ps) in the intake conduit (22) to an ambient pressure (pu), wherein the model (A), as its input variable, additionally receives a temperature (Tbr) of the air present in the combustion chamber (14), and wherein the temperature of the air present in the combustion chamber is ascertained on the basis of a model, which as its input variables receives a detected temperature of the air in the intake conduit and at least one further detected temperature of the

engine, wherein said at least one further detected temperature is selected from the group consisting of a coolant temperature, an exhaust-gas temperature, a cylinder head temperature, or any combination of the coolant temperature, exhaust-gas temperature and cylinder head temperature.

14. (previously presented) A control and/or regulating device (48) for an internal combustion engine (10), characterized in that it is programmed for use in a method ~~as defined by claim 1~~ for operating an internal combustion engine (10), in which an air filling (rl) in a combustion chamber (14) is ascertained, taking a pressure (ps) in an intake conduit (22) into account, characterized in that the air filling (rl) is ascertained on the basis of a model (A), which as its input variables receives an rpm (nmot) of a crankshaft (44) and a ratio of the pressure (ps) in the intake conduit (22) to an ambient pressure (pu), wherein the model (A), as its input variable, additionally receives a temperature (Tbr) of the air present in the combustion chamber (14), and wherein the temperature of the air present in the combustion chamber is ascertained on the basis of a model, which as its input variables receives a detected temperature of the air in the intake conduit and at least one further detected temperature of the engine, wherein said at least one further detected temperature is selected from the group consisting of a coolant temperature, an exhaust-gas temperature, a cylinder head temperature, or any combination of the coolant temperature, exhaust-gas temperature and cylinder head temperature.